

**WHAT IS CLAIMED IS:**

1. A method of storing an array of digital data into a memory, the memory having a plurality of memory pages, each memory page having a first memory section and a second memory section, the method comprising the steps of:
  - 5 dividing the array of digital data into a plurality of block units, each of the block units having a plurality of odd rows and a plurality of even rows, each of the odd rows and the even rows having at least one byte;
  - storing subsequent odd rows of at least one of the block units into consecutive storage locations in the first memory section, and storing subsequent even rows of at least one of the block units into consecutive storage locations in
  - 10 the second memory section.
2. The method of claim 1, wherein the array of digital data comprises a picture in a video bit stream.
3. The method of claim 1, wherein the first memory section has a first number of first areas and the second memory section has a second number of second areas, each of the first areas and the second areas has consecutive storage locations, each of the first number and the second number is equal to or larger than one.
- 15 4. The method of claim 3, wherein the first number is equal to the second number.
5. The method of claim 3, wherein the first number is different from the second number.
- 20 6. The method of claim 3, wherein both the first number and the second number have a value of one.
7. The method of claim 3, wherein both the first number and the second number have a value of two.

8. The method of claim 1, wherein each of the block units has  $m$  rows, wherein  $m$  is an integer equal to or larger than four.

9. The method of claim 8, wherein  $m$  is equal to thirty-two.

10. A method of storing an array of digital video data representing a picture in a video

5 bit stream into a memory, the memory having a plurality of memory pages, each memory page having a first memory section and a second memory section, the method comprising the steps of:

dividing the array of digital video data into a plurality of block units, each of the  
block units having a plurality of odd rows and a plurality of even rows, each  
10 of the odd rows and the even rows having at least one byte;

storing subsequent odd rows of at least one of the block units into consecutive  
storage locations in the first memory section, and storing subsequent even  
rows of at least one of the block units into consecutive storage locations in  
the second memory section.

15 11. The method of claim 10, wherein the first memory section has a first number of  
first areas and the second memory section has a second number of second areas,  
each of the first areas and the second areas has consecutive storage locations, each  
of the first number and the second number is equal to or larger than one.

12. The method of claim 10, wherein each of the block units has  $m$  rows, wherein  $m$   
20 is an integer equal to or larger than four.

13. A method for storing an array of digital data representing a picture into a memory  
and retrieving a prediction block of the picture from the memory, the memory  
having a plurality of memory pages, each memory page having a first memory  
section and a second memory section, the method comprising the steps of:

25 dividing the array of digital video data into a plurality of block units, each of the

block units having a plurality of odd rows and a plurality of even rows, each of the odd rows and the even rows having at least one byte;

storing subsequent odd rows of at least one of the block units into consecutive storage locations in the first memory section, and storing subsequent even rows of at least one of the block units into consecutive storage locations in the second memory section;

retrieving the digital data representing the prediction block stored in the first memory section, and retrieving the digital data representing the prediction block stored in the second memory section.

10 14. The method of claim 13, wherein the first memory section has a first number of  
first areas and the second memory section has a second number of second areas,  
each of the first areas and the second areas has consecutive storage locations, each  
of the first number and the second number is equal to or larger than one.

15. The method of claim 13, wherein each of the block units has  $m$  rows, wherein  $m$   
is an integer equal to or larger than four.